ALCOA/LAVACA BAY

TEXAS

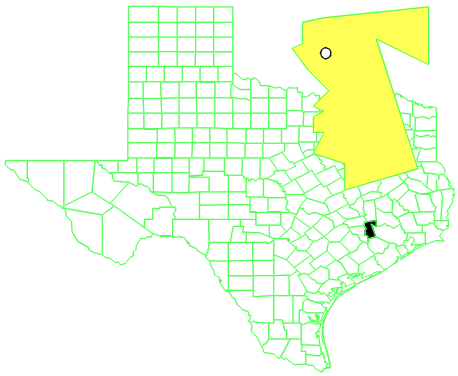
EPA ID# TXD008123168

EPA REGION 6

CONGRESSIONAL DISTRICT 14

Calhoun County

Updated: 7/17/97



Site Description

Location:

- The Aluminum Company of America (ALCOA) Point Comfort Operations (PCO) Plant is located in Calhoun county in southeast Texas near the City of Point Comfort. The Plant is bordered by Lavaca Bay on the west, Cox Creek/Cox Lake on the east, State Highway 35 on the northwest and industrial and agricultural areas on the north and northeast.

Population:

- Approximately 1,100 people live in Point Comfort, Texas and 10,000 people live in Port Lavaca, Texas.

Setting:

- The Site consists of the ALCOA PCO Plant, an associated dredge spoil island, and portions of Lavaca Bay, Cox Bay, Cox Creek, Cox Cove, Cox Lake and western Matagorda Bay.
- The ALCOA PCO plant covers approximately 3,500 acres and the dredge spoil island is approximately 420 acres.
- Lavaca Bay has a surface area of approximately 64 square miles and Cox Bay has a surface area of approximately 8 square miles. Cox Cove includes an extensive marsh area located in the northwestern portion of Cox bay. There are several oyster reefs and oyster beds throughout the area. Marshes and wetlands are found at several locations in the vicinity of the Site. Waterbird colonies have been identified and monitored on or near the Site.

Hydrology:

- The Beaumont Formation underlies the site and generally consists of a sequence of silty clays, sandy clayey silts, clays, and silty sands. The Formation is 200 to 300 feet dep in the Point Comfort area.
- Three primary saturated sand and silt zones with intervening clay units have been identified in the upper 100 feeet of the Beaumont beneath the site. The water table is generally within 14 and 20 feet below the surface.
- The Chicot Aquifer underlies the Beaumont Formation, and the base of

the Chicot is at a total depth of 1,200.

- Potable water supplies in the area come from deep groundwater wells since shallow groundwater in the vicinity of the Site hase typically not been developed due to high chloride and Total Dissolved Solids (TDS) content. No potable water wells are located a the ALCOA facility or in its immediate vicinity.

- Water supply for ALCOA PCO plant is obtained from an off-site well field (the Midway well field) in southern Jackson County.

Wastes and Volumes

- A total of 52 solid waste management units have been identified at the ALCOA facility. ALCOA currently produces alumina by refining bauxite. The bauxite refining process primary waste is bauxite residue, which has historically and is currently disposed of in four bauxite residue lakes (also known as the "red mud lakes").

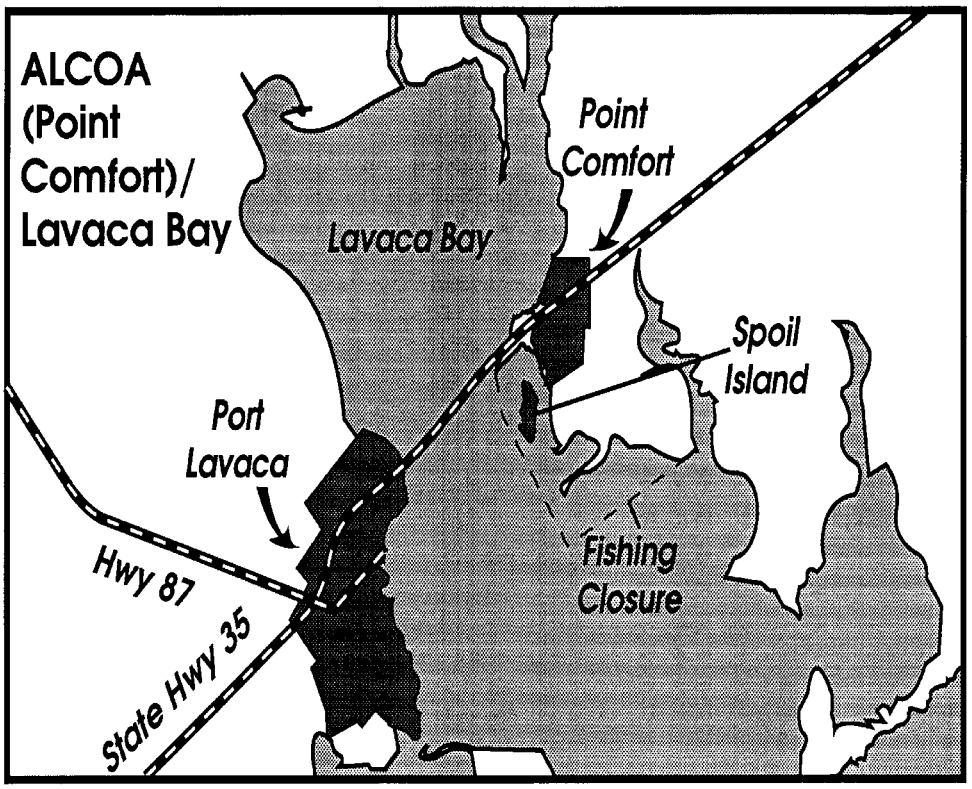
- Chemicals of Potential Concern (COPCs) have been identified for the different areas to be investigated during the Remedial Investigation (RI).
  The major COPCs in Lavaca Bay sediments include mercury and Polynuclear Aromatic Hydrocarbons (PAHs).

- Volumes of materials to be remediated has not yet been determined and will be evaluated in the Feasibility Study (FS).

Site Assessment and Ranking

NPL LISTING HISTORY
Site HRS Score: 30.67
Proposed Date: 6/23/93
Final Date: 2/23/94
NPL Update: No. 15

Site Map and Diagram



The Remediation Process

Site History:

- The PCO Plant began operation as an aluminum smelter utilizing alumina as the raw material to produce aluminum metal. The smelter operated from 1948 until 1980.
- The plant is currently an alumina refining operation that utilized bauxite ore to produce alumina.
- A cryolite plant operated from around 1962 to 1980.
- From 1966 into the 1970s, ALCOA operated a chlorine-alkali plant where ALCOA produced chlorine gas and sodium hydroxide. Part of the process involved the use of a mercury cathode. Waste water containing mercury was discharged into Lavaca Bay through outfalls located on an off-shore gypsum lagoon located on Dredge Island. Dredge spoils, contaminated with mercury, were disposed of in several areas on the site. Bay sediments are now contaminated with the waste mercury.
- The oil and gas refining and power generation at the Neumin Gas Plant was operated by ALCOA from approximately 1958 to 1988. ALCOA sold the Neumin Gas Plant and the land upon which it is constructed to Formosa Plastics.

- A metal plating operation was also operated but is now inactive.

- Witco Chemical Corporation began operations in 1964 on approximately 7 acres located with the boundaries of the Plant. Witco processed coal tar for the manufacture of electrode binder pitch and creosote. Operations were discontinued in December 1985.

Health Considerations:

- In April 1988, the Texas Department of Health issued a measure prohibiting the taking of finfish and crabs from a specific part of Lavaca Bay ("Closed Area") due to levels of mercury in fish tissue above Food and Drug Administration standards. The "Closed Area" is approximately one square mile of Lavaca Bay surrounding the ALCOA facility.

- A Baseline Risk Assessment will be conducted as part of RI/FS to evaluate risk to human health and the environment.

Record of Decision

No ROD has been signed for the ALCOA/Lavaca Bay site to date

Community Involvement

- Community Involvement Plan: 1/95
- Open houses and workshops: 8/93, 4/94, 9/94
- Milestone EPA Fact Sheets: 8/93, 4/94
- Proposed Plan Fact Sheet and Public Meeting:
- ROD Fact Sheet:
- ALCOA (PRP) Community Involvement Plan: Draft 6/94, Final 1/95.
- ALCOA (PRP) Milestone Fact Sheets:
- Citizens on EPA site mailing list: 364
- Constituency Interest: The site has an historically medium to low level of citizen interest. A Community Advisory Group was established by ALCOA and meets on a monthly basis.

- Site Repository: Calhoun County Public Library, 200 West Mahan, Port Lavaca, TX 77979

Technical Assistance Grant

- Availability Notice: 8/93, 4/94
- Letters of Intent Received: 5/29/95: Calhoun County Resource Watch
- Grant Award: Denied

Fiscal and Program Management

- **Project Manager (EPA):** Gary A. Baumgarten, 214-665-6749, Mail Code: 6SF-AT
- **State Contact:** (TNRCC) Glenda Champagne, 512/239-2485, Mail Code: 143
- **Community Involvement Coord. (EPA):** Olivia Balandrán, 214-665-6584 Mail Code: 6SF-P
- **Attorney (EPA):** Pamela Travis, 214-665-8056, Mail Code: 6SF-DL
- **State Coordinator (EPA):** Shirley Workman, 214-665-8522, Mail Code: 6SF-AT
- **Prime Contractor:**

Cost Recovery: PRP Lead (Enforcement)

- PRPs Identified: Approximately 7
- Viable PRPs: 3

Present Status and Issues

- On March 31, 1994, EPA and ALCOA entered into a Superfund Administrative Order on Consent (AOC) to conduct a remedial investigation, risk assessment, and feasibility study (RI/FS) and possibly perform expedited response/removal actions.
- On June 6, 1994 EPA, NOAA and the Texas Natural Resource Conservation Commission (TNRCC) entered into a Cooperative Management Agreement to facilitate coordination and communication between parties during oversight of the RI/FS.
- ALCOA and the natural resource trustees are currently collecting the appropriate data during the Superfund RI to support a natural resource damage assessment.
- The Project Management Plan for the Lavaca Bay site has been approved. The Project Management Plan describes the activities proposed to conduct the RI and includes a discussion of the technical approach, schedule and personnel for the RI.
- Major sampling conducted by ALCOA to date includes evaluation of sediments and surface water in the "Closed Area" of Lavaca Bay and the remainder of Lavaca Bay as well as sampling and analysis of finfish and shellfish from Lavaca Bay. Other investigations to be conducted include installation of a ground water monitoring network, a focused investigation in the old Chlor-alkali process area and Site I landfill, a surface soil investigation at additional Potential Source Areas, and evaluation of releases from Dredge Island.
- ALCOA has proposed to undertake an early action to fortify the Dredge Island from potential damage from a hurricane hitting the Port Lavaca area. Engineering studies and design work are ongoing.

Benefits

- Following the completion of the RI/FS and a baseline risk assessment, a Proposed Plan will provide the Agency's proposed remedial action for the site. The ultimate remedial action decided upon following public meetings and public comment will be presented in a Record of Decision (ROD). The ROD will present the cleanup measures determined to be protective of human health and the environment.
- Cleanup measures will eventually result in the Texas Department of Health rescinding the Fish Closure order. This will enable the community to keep fish and shellfish from all areas of Lavaca Bay.